TRIAL OF FOLIC ACID THERAPY IN PSORIASIS

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PATIENTS suffering from psoriasis frequently have a low serum folate (Knowles, Shuster and Wells, 1969; Shuster, Marks and Chanarin, 1967). It is usually accepted that this is due to loss of folate in the psoriatic desquamation (Hild, 1969), though it has been suggested that increased utilisation of folate is possibly a more important factor (Touraine, Revuz, Zittoun, Jarret and Tulliez, 1973). No matter what the true explanation may be, the serum folate is undoubtedly often reduced in psoriasis, and it was decided to examine the effect of administering folic acid to patients suffering from psoriasis in the hope that it might be of therapeutic benefit.

METHOD

A double blind trial using the 5 mg tablet of folic acid (BP) and inert facsimiles (manufactured by Arthur H. Cox & Co. Ltd., Brighton) was carried out as follows. Patients suffering from typical and extensive psoriasis were included in the trial provided they were over 18 years of age and gave their informed consent. Before starting the trial, each patient's peripheral blood was examined and the serum vitamin B12 and folate levels determined. Patients selected for the trial were allocated at random into test and control groups. Patients in the test group took one 5 mg tablet of folic acid (BP) twice daily for six weeks, and patients in the control group took an inert facsimile twice daily for six weeks. The tablets were dispensed in coded boxes and distributed to the patients at the clinic without the dermatologists or the patients being aware which boxes contained active and which inert tablets. Hydroxocobalamin in a dose of 2,000 micrograms was administered by intramuscular injection to all patients on commencing the trial and another 1,000 micrograms once weekly until they ended the trial. The hydroxocobalamin was given as a precaution against the possibility of folic acid precipitating a neuropathy should any of the patients have incipient Addisonian anaemia. During the trial no conventional medication for psoriasis such as dithranol paste was employed, though in some cases emollients were permitted. Each patient remained under the care of one dermatologist (T.A.J.D., 16; K.W.S., 5). At the end of the trial period patients were clinically assessed and classified as showing no definite change, definite improvement or definite deterioration in their psoriasis.

RESULTS

Twenty-two patients entered the trial and 21 completed it. Table 1 shows that the two groups did not differ significantly (at $P<0.05$) with respect to the effects of the treatment.

TABLE 1: EFFECT OF FOLIC ACID ADMINISTRATION IN PSORIASIS

	Patients		
Clinical assessment	*Folic acid group*	*Control group*	*Total*
Definite improvement	3(25.0%)	2(22.2%)	5(23.8%)
No definite change	9(75.0%)	6(66.7%)	15(71.4%)
Definite deterioration	0(—)	1(11.1%)	1 (4.8%)
Total	12(100%)	9(100%)	21(100%)

$P=0.78$

DISCUSSION

As there is no significant difference in respect of the effect of treatment (at $P<0.05$) between the patients who received folic acid and those who received inert facsimile, there is little evidence for rejection of the null hypothesis that folic acid and inert tablets have a similar effect on psoriasis. However, with the relatively small number of patients participating in the trial, only large differences in treatment effects are likely to be detected at the 5 per cent level.

Apart from the absence of therapeutic benefit, the fact that no evidence of an adverse effect was detected is of some interest in view of the widespread use of folic acid antagonists in the treatment or psoriasis.

SUMMARY

A double blind trial of folic acid therapy in psoriasis was carried out in 21 patients over a period of six weeks. The results indicate neither a beneficial nor an adverse effect.

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REFERENCES

HILD, D. H. (1969) Folate losses from the skin in exfoliate dermatitis. *Archives of Internal Medicine, 123,* 51.

KNOWLES, J. P., SHUSTER, S. and WELLS, G. (1969) Folic acid deficiency in patients with skin diseases. *Lancet, 1,* 1138.

SHUSTER, S., MARKS, J. and CHANARIN, I. (1967) Folic acid deficiency in patients with skin disease. *British Journal of Dermatology, 79,* 398.

TOURINE, R., REVUZ, J., ZITTOUN, J., JARRET, J. and TULLIEZ, M. (1973) Study of folate in psoriasis; blood levels, intestinal absorption and cutaneous loss. *British Journal of Dermatology, 89,* 335.